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Mikuni TM42-6

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INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Mikuni HSR42 Carburetor, model TM42-6. Designed for performance engine builders, this carburetor offers straightforward installation and customization for various motorcycle applications.

The HSR42 Carburetor is supplied without an intake manifold, cables, or air cleaner, allowing users to select components tailored to their specific needs. Its standard body design ensures compatibility and a natural appearance on most stock motorcycles.



Image: The Mikuni HSR42 Carburetor, model TM42-6, showcasing its design and components.

SAFETY INFORMATION

Always prioritize safety when working with fuel systems and internal combustion engines. Ensure the engine is cool before beginning any work. Disconnect the battery to prevent accidental starting. Wear appropriate personal protective equipment, including gloves and eye protection. Fuel is highly flammable; work in a well-ventilated area away from open flames or sparks. Refer to your motorcycle's service manual for specific safety precautions and torque specifications.

INSTALLATION

The Mikuni HSR42 Carburetor is designed for bolt-on installation. However, specific intake manifolds, throttle cables, and air cleaner assemblies must be sourced separately to match your motorcycle's requirements.

1. **Preparation:** Ensure the engine is off and cool. Disconnect the battery's negative terminal.
2. **Remove Old Carburetor:** Carefully disconnect fuel lines, throttle cables, and any vacuum lines from the existing carburetor. Remove mounting bolts and detach the old carburetor.
3. **Inspect Manifold:** Check the intake manifold for cracks, damage, or debris. Replace gaskets if necessary to ensure an airtight seal.
4. **Install HSR42 Carburetor:** Mount the Mikuni HSR42 Carburetor onto the intake manifold using appropriate gaskets and hardware. Ensure a secure fit without overtightening.
5. **Connect Components:** Attach the fuel line, ensuring it is free of kinks. Connect the throttle cables, verifying smooth operation of the throttle slide. Install your chosen air cleaner assembly.

6. **Initial Adjustments:** Perform initial adjustments for idle speed and mixture as described in the 'Tuning and Adjustment' section.
7. **Final Checks:** Reconnect the battery. Inspect all connections for leaks and proper routing before starting the engine.

OPERATION

The Mikuni HSR42 Carburetor provides precise fuel delivery for optimal engine performance. Proper operation involves understanding its basic functions:

- **Starting:** For cold starts, use the choke (enrichment circuit) as needed. Once the engine warms up, gradually disengage the choke.
- **Throttle Response:** The HSR42 offers excellent throttle response. Smooth and progressive throttle application is recommended for optimal performance and fuel efficiency.
- **Idle:** The carburetor features an idle adjuster for setting the engine's idle speed. Ensure the idle is stable and within the manufacturer's recommended RPM range for your motorcycle.

TUNING AND ADJUSTMENT

While the HSR42 comes with mid-range jetting, fine-tuning may be required for specific engine configurations, altitude, or environmental conditions. The primary adjustments are the idle speed and the air/fuel mixture screw.

- **Idle Speed Adjustment:** Locate the idle speed screw (often a large, knurled screw). Turn clockwise to increase idle speed, counter-clockwise to decrease. Adjust to your engine's specified idle RPM.
- **Air/Fuel Mixture Screw:** This screw controls the air/fuel ratio at idle and off-idle.
 - Start with the engine fully warmed up.
 - Turn the mixture screw clockwise until the engine RPM begins to drop or run rough. Note the position.
 - Slowly turn the screw counter-clockwise until the engine RPM peaks or runs smoothly, then continues to drop as it gets too rich. Note the position.
 - Set the screw midway between these two points, or slightly on the richer side of the peak RPM for best performance and engine longevity.
- **Jetting:** For significant changes in engine setup or environment, main jet and pilot jet changes may be necessary. Consult a qualified mechanic or Mikuni tuning guides for advanced jetting procedures.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Mikuni HSR42 Carburetor.

- **Air Filter:** Regularly inspect and clean or replace the air filter according to your motorcycle's service schedule. A dirty air filter can restrict airflow and affect carburetor performance.
- **Fuel Filter:** Check and replace the in-line fuel filter periodically to prevent contaminants from reaching the carburetor.
- **Carburetor Cleaning:** Over time, fuel deposits can build up. If performance degrades, the carburetor may need to be disassembled and cleaned with a specialized carburetor cleaner. Pay close attention to jets and passages.
- **Float Level:** Periodically verify the float level is set correctly to prevent fuel overflow or starvation.

- **Cable Inspection:** Inspect throttle cables for fraying, sticking, or damage. Lubricate as needed.

TROUBLESHOOTING

If you encounter issues with your Mikuni HSR42 Carburetor, consider the following common problems and solutions:

Symptom	Possible Cause	Solution
Engine won't start or hard starting	No fuel, clogged jets, incorrect choke use, fouled spark plug	Check fuel supply, clean jets, use choke correctly, inspect/replace spark plug
Rough idle or stalling	Incorrect idle speed, mixture screw adjustment, vacuum leak, dirty pilot jet	Adjust idle/mixture, check for leaks, clean pilot jet
Poor acceleration or hesitation	Incorrect main jet, accelerator pump issue, dirty air filter	Check/change main jet, inspect accelerator pump, clean air filter
Fuel leaks	Damaged float bowl gasket, incorrect float level, stuck float needle	Replace gasket, adjust float level, clean float needle/seat
Excessive fuel consumption	Rich mixture, incorrect float level, large main jet	Adjust mixture, check float level, consider smaller main jet

If troubleshooting steps do not resolve the issue, it is recommended to consult a certified mechanic or Mikuni technical support.

SPECIFICATIONS

Brand: Mikuni

Model: TM42-6

Product Dimensions: 4.1"D x 6.1"W x 3.4"H

Item Weight: 2.8 pounds

Flange Type: Bolt On

Specific Uses For Product: Performance

OEM Part Number: TM42-6

UPC: 172304124819

WARRANTY AND SUPPORT

Specific warranty details for the Mikuni HSR42 Carburetor TM42-6 are not provided within this document. For warranty claims, technical support, or service inquiries, please contact Mikuni directly or refer to the official Mikuni website.

Legal Disclaimer: Please note that this carburetor is intended for sale to residents of 49 states only. Purchases from California residents may be canceled due to specific regulations.

